

**TECHNICAL REVIEW DOCUMENT**  
**For**  
**MINOR MODIFICATION TO OPERATING PERMIT 95OPJE084**

TXI Boulder Plant  
Jefferson County  
Source ID 0590409

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August 2006

**I. Purpose:**

This document establishes the decisions made regarding the requested modifications to the Operating Permit for the TXI Boulder Plant. This document provides information describing the type of modification and the changes made to the permit as requested by the source and the changes made due to the Division's analysis. This document is designed for reference during review of the proposed permit by EPA and for future reference by the Division to aid in any additional permit modifications at this facility. The conclusions made in this report are based on the information provided in the request for modification submitted to the Division on June 16, 2006, July 26, 2006 & August 8, 2006, various e-mail correspondence and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

**II. Description of Permit Modification Request/Modification Type**

The original operating permit for the TXI Boulder Plant was issued on January 1, 2004. TXI submitted a request on June 16, 2006 to modify the operating permit and add a 20 ton kiln dust storage silo. In their request the source indicated that the modification met the requirements for a minor permit modification and requested that the modification be processed under the minor modification procedures in Colorado Regulation No. 3, Part C, Section X. The source requested emissions based on an emission rate from a similar silo at this location. Requested emissions for this silo are below the PSD significance levels.

Colorado Regulation No. 3, Part C, Section X.A identifies those modifications that can be processed under the minor permit modification procedures. Specifically, minor permit modifications “are not otherwise required by the Division to be processed as a significant modification” (Colorado Regulation No. 3, Part C, Section X.A.6). The Division requires that “any change that causes a significant increase in emissions” be processed as a significant modification (Colorado Regulation No. 3, Part C, Section I.B.36.h.(i)). Since requested emissions are below PSD significance levels, the Division agrees that this modification qualifies as a minor modification.

### **III. Modeling**

The Division’s modeling guidance identifies modeling thresholds and no modeling is required for this project, since requested emissions are below the modeling threshold.

### **IV. Discussion of Modifications Made**

#### **Source Requested Modifications**

The Division addressed the source’s requested modifications as follows:

#### **20 ton kiln dust storage silo**

The source requested that approval be given to install and operate the following:

**Unit P018, 20 ton kiln dust storage silo with wheelabrator model 36, size 45, dust collector.**

**Applicable Requirements** – TXI submitted this application in order to add this silo to the Title V permit and allow replacement of the existing dust collector. Apparently this silo has been on site since the 1990s. Since the source has requested that this application be processed as a combined construction/operating permit using the minor modification procedures in Reg 3, Part C, Section X, no construction permit will be issued and all applicable requirements will be incorporated directly into the operating permit with this modification. The applicable requirements for this unit are as follows:

- Emissions of air pollutants shall not exceed the following limitations (as determined by the APCD analysis):
  - o PM 4.51 tons/yr
  - o PM<sub>10</sub> 4.51 tons/yr

Note that since this engine is a true minor source, the Division does not require that monthly emission and fuel consumption limits be imposed on this source for

the first year of operation as this requirement only applies for major or synthetic minor sources.

- Kiln dust processing shall not exceed 13,140 tons per year (as requested in the APEN submitted July 26, 2006).
- Opacity of emissions shall not exceed 20% (Reg 1, Section II.A.1)
- During periods of startup, process modification, or adjustment of control equipment visible emissions shall not exceed 30% opacity for more than six minutes in any sixty consecutive minutes (Reg 1, Section II.A.4).
- This silo commenced construction after 8/31/1983. This source is subject to the provisions of 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart A "General Provisions" and Subpart OOO "Standards of Performance for Nonmetallic Mineral Processing Plants" as stated in Colorado Regulation No. 6, Part A.
- The standard construction permit self-certification requirement will not be included in the permit since compliance will be demonstrated through submittal of the reports found in Appendix B & C of the Title V permit.
- The Division will not include the standard construction permit language discussing commencing construction or notice of start-up since this silo is already in operation.

#### **Emission Factors –**

Since this storage silo is subject to NSPS OOO, the standards for particulate matter found in §60.672 apply. Stack emissions shall not exceed 0.05 gram/dscm. This particulate standard is considered federally enforceable and may be used to limit PTE. This rate converts to 3.12e-6 lb/dscf. This will be used to determine PTE and actual emissions. Please note that TXI has requested the maximum processing rate. Thus, actual emissions will equal PTE.

Maximum design process rate = 1.5 ton/hr

Dust collector design rate = 5500 ACFM

$$EmissionFactor = \left( \frac{3.12e-6 lb}{dscf} \right) (5500 cfm) \left( \frac{60 min}{hr} \right) \left( \frac{hr}{1.5 ton} \right) = \frac{0.687 lb PM_{10}}{ton}$$

This emission factor is larger than the emission factor proposed by TXI. TXI proposed an emission factor from another permitted silo. The Division used the same logic as was used in the permitting of the other silo to develop this emission factor.

**Monitoring Plan** – TXI shall monitor process rate and emissions on a monthly basis. Monitoring for visible emissions (non-Method 9) shall be conducted on a weekly basis. Corrections are required if emissions are present, and a Method 9 reading may be necessary if emissions persist. Weekly opacity monitoring can be relaxed to monthly after 12 months where no visible emissions are present during the weekly inspection. A compliance test according to NSPS OOO is required to demonstrate compliance with the NSPS OOO emission limit.

### **Other Modifications**

In addition to the requested modifications made by the source, the Division used this opportunity to include changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this modification.

The Division has made the following revisions:

#### **Section I – General Activities and Summary**

Section IV – Condition 3.g. was added to the list of state-only requirements.

#### **Section III – Permit Shield**

The citation in the permit shield was corrected. The reference to Part A, Section I.B.43 was changed to Part A, Section I.B.44 and the reference to Part C, Section XIII was changed to Part C, Section XIII.B.

#### **Section IV – General Conditions**

The definition of “prompt” has changed and Condition 21 has been updated with the new definition.

Minor language changes to Condition 22.d have been incorporated.

#### **Appendices B & C**

The appendix language was revised to the most current language.